Please amend the claims as follows:

What is claimed:

1. (Previously Presented) A Coriolis flowmeter for measuring a process material flow having an ultra high level of purity, said Coriolis flowmeter comprising:

a base;

flow tube apparatus adapted to receive said process material flow, said flow tube apparatus is formed of a material, such as PFA, that does not transfer ions from said flow tube apparatus to said process material;

end portions of said flow tube apparatus coupled to said base to create substantially stationary nodes at said end portions;

a driver coupled to said flow tube apparatus for vibrating said flow tube apparatus containing said process material flow;

pickoff means coupled signalwise to said flow tube apparatus for generating signals representing induced Coriolis deflections of said vibrating process material filled flow tube apparatus; and

meter electronics that receives said signals from said pickoff means and generates output information pertaining to said process material flow.

2. (Previously Presented) The Coriolis flowmeter of claim 1 characterized in that said flow tube apparatus defines a substantially straight single flow tube.

3. (Original) The Coriolis flowmeter of claim1 characterized in that the entirety of the wetted flow path of said Coriolis flowmeter comprises a PFA substance.

4. (Previously Presented) The Coriolis flowmeter of claim 1 characterized in that said flow tube apparatus defines more than one flow tube.

5. (Previously Presented) The Coriolis flowmeter of claim 1 characterized in that said pickoff means is an electro-magnetic device having a magnet connected to said flow tube apparatus and further having a coil.

6. (Currently Amended) The Coriolis flowmeter of claim 1 characterized in that said pickoff apparatus comprises a light source that emits a beam and an optical detector that receives said beam, said beam is oriented substantially transverse to said flow tube;

said light source and said optical detector are spaced apart from said flow tube on opposite sides of said flow tube apparatus;

said flow tube apparatus is positioned between said light source and said optical detector to alter the characteristics of a light beam received by said optical detector from said light source, said optical detector is responsive to said alteration to generate said signals representing said Coriolis deflections.

7. (Previously Presented) The Coriolis flowmeter of claim 1 characterized in that said base has a lower surface and an inner pair of upwardly extending walls as well as an outer pair of upwardly extending walls parallel to said inner walls;

openings in each of said upwardly extending walls are coaxially aligned to receive said flow tube apparatus.

8. (Previously Presented) The Coriolis flowmeter of claim 1 characterized in that said base is substantially u-shaped and has a lower surface and a pair of upwardly extending walls proximate sides of said base;

openings in each of said upwardly extending walls are coaxially aligned to receive said flow tube apparatus.

9. (Previously Presented) The Coriolis flowmeter of claim 7 characterized in that said single flow tube extends through coaxial openings in said walls.

10. (Currently Amended) The Coriolis flowmeter of claim 1 characterized in that said base is a solid rectangular element defining a parallelepiped;

said flow tube apparatus is connected to posts affixed to said base betwe n upwardly extending walls affixed to a top surface of said base.

11. (Previously Presented) The Coriolis flowmeter of claim 1 characterized in that:

an inlet of said flow tube apparatus receives said process material flow from a supply tube;

an outlet of said flow tube apparatus is coupled to an inlet of a return tube;

said return tube is coupled to said base and is positioned parallel to said flow tube apparatus and extends through walls of said base, and

said return tube is adapted to be connected to an exit tube to extend said process material flow towards a user application.

12. (Previously Presented) The Coriolis flowmeter of claim 2 characterized in that said flow tube apparatus comprises said single flow tube and that said base has a mass substantially greater than the mass of said flow tube with process material.

13. (Original) The Coriolis flowmeter of claim 12 characterized in that the mass of said base is at least 1000 times the mass of said single flow tube with process material.

14. (Original) The Coriolis flowmeter of claim 12 characterized in that the mass of said base is at least 100 times the mass of said single flow tube with process material.

15. (Original) The Coriolis flowmeter of claim 12 in which said driver is affixed to the top of said single flow tube when in use.

16. (Currently Amended) The Coriolis flowmeter of claim 12 further comprising:

a dynamic balancer means ~~affixed~~ coupled to said base proximate vibrational nodes of said flow tube to maintain said nodes at a reduced level of vibration.

17. (Original) The Coriolis flowmeter of claim 16 characterized in that said dynamic balancer means is an active dynamic balancer controlled by the exchange of signals with said meter electronics.

18. (Previously Presented) The Coriolis flowmeter of claim 12 characterized in that said base is substantially u-shaped and has a lower surface and a pair of upwardly extending walls containing coaxially aligned openings for receiving said single flow tube.

19. (Previously Presented) The Coriolis flowmeter of claim 18 characterized in that said single flow tube extends through said coaxial openings in said walls.

20. (Original) The Coriolis flowmeter of claim 1 characterized in that said flow tube apparatus comprises a first and a second flow tube coupled to said base and positioned parallel to each other, said first and second flow tubes are adapted to be vibrated in phase opposition by said driver.

21. (Previously Presented) The Coriolis flowmeter of claim 20 characterized in that:

said driver is affixed to both said first flow tube and said second flow tube;

said pickoff means being affixed to both said first and second flow tubes to detect the Coriolis deflections of said first and second flow tubes.

22. (Original) The Coriolis flowmeter of claim 20 characterized in that said first and second flow tubes are connected in series with respect to said material flow.

23. (Original) The Coriolis flowmeter of claim 20 characterized in that said first and second flow tubes are connected in parallel with respect to said material flow.

24. (Previously Presented) The Coriolis flowmeter of claim 20 further comprising:

a return tube coupled to said base and oriented parallel to said first and second flow tubes;

said return tube receives said process material flow from said first and second flow tubes and extends said material flow towards a user application.

25. (Previously Presented) The Coriolis flowmeter of claim 20 characterized in that:

said base is u-shaped and has upwardly extending walls;

said first and second flow tubes extend through said walls of said base and have inlet and outlet ends projecting beyond the outer surfaces of said walls.

26. (Previously Presented) A Coriolis flowmeter for measuring a flow of process material having an ultra high level of purity;

said Coriolis flowmeter comprising:

a single flow tube formed of a material, such as PFA, that does not transfer ions from said single flow tube to said process material;

said single flow tube has high flexibility and further has a stiffness substantially lower than a metal or glass flow tube;

the entirety of the wetted path of said Coriolis flowmeter comprises said PFA material;

a driver coupled to said single flow tube for vibrating said single flow tube containing said process material;

a massive base coupled by upwardly extending walls to ends of said single flow tube to absorb undesired vibratory forces generated by said vibrating flow tube;

said base defines stationary nodes proximate opposing ends of said flow tube;

an inlet connector connected to said massive base and adapted to receive a flow of said process material from a supply tube;

an inlet end of said single flow tube is affixed to said inlet connector;

said input connector sealably connects said inlet end of said single flow tube to an outlet end of said supply tube to effect the extension of said process material flow in said supply tube to said single flow tube;

said inlet connector maintains said inlet end of said flow tube fixed with respect to said massive base;

an outlet end of said single flow tube affixed to a second connector for extending said process material flow via an exit tube towards a user destination;

a pair of pickoffs coupled to said single flow tube on opposite axial sides of said driver for generating signals representing Coriolis induced deflections of said vibrating material filled single flow tube;

meter electronics; and

conductors extending signals from said pickoffs to said meter electronics;

said meter electronics receives said pickoff output signals and generates output information pertaining to said process material flow.

27. (Previously Presented) The Coriolis flowmeter of claim 26 further comprising;

a return tube connected to said massive base parallel to said single flow tube;

end portions of said single flow tube and said return tube are glued to said massive base to maintain said single flow tube and said return tube immovable with respect to said massive base;

an inlet of said return tube;

an intermediate tube connecting said outlet end of said single flow tube and said inlet end of said return tube via said second connector to extend said process material flow from said outlet end of said single flow tube to said inlet of said return tube;

an outlet connector connected to said massive base for receiving said flow of said process material from said outlet end of said return tube;

said outlet connector sealably connects said outlet end of said return tube to an inlet end of an exit tube to effect the extension of said process material flow in said return tube to said exit tube;

said exit tube is adapted to extend said process material flow to a user destination.

28. (Previously Presented) The Coriolis flowmeter of claim 1 characterized in that said flow tube apparatus has high flexibility and a stiffness substantially lower than flow tube apparatus formed of metal or glass.

29. (Previously Presented) The Coriolis flowmeter of claim 1 characterized in that said flow tube apparatus has walls substantially thinner than the diameter of the inner portion of the flow tube apparatus through which said material flows.

30. (Previously Presented) The Coriolis flowmeter of claim 27 characterized in that said massive base has a pair of upwardly extending parallel side walls having coaxial openings through which said single flow tube and said return tube extend.

31. (Previously Presented) The Coriolis flowmeter of claim 30 characterized in that said massive base is substantially u-shaped.

32. (Original) The Coriolis flowmeter of claim 26 characterized in that said massive base is a solid rectangular element defining a parallelepiped;

said single flow tube is mounted to upwardly extending posts affixed to a surface of said massive base.

33. (Previously Presented) The Coriolis flowmeter of claim 30 in which ends of said single flow tube and said return tube extend beyond the outer surface of said upwardly extending walls.

34. (Previously Presented) The Coriolis flowmeter of claim 26 characterized in that said single flow tube is substantially straight.

35. (Previously Presented) The Coriolis flowmeter of claim 26 further comprising a second flow tube coupled to said massive base to define a dynamically balanced structure when vibrated by said driver in phase opposition to said single flow tube while containing said process material.

36. (Original) The Coriolis flowmeter of claim 26 characterized in that said driver is positioned when in use on a top surface of said single flow tube.

37. (Original) The Coriolis flowmeter of claim 26 further comprising:

a dynamic balancer means coupled to said massive base proximate said nodes to reduce the vibration of said nodes.

38. (Previously Presented) The Coriolis flowmeter of claim 1 characterized in that said flow tube apparatus comprises a single flow tube and that said base is substantially U-shaped and has a mass substantially greater than the mass of said flow tube with process material.

39. (Previously Presented) The Coriolis flowmeter of claim 1 characterized in that said flow tube apparatus has:

a drive frequency deflection that extends over the entirety of the axial length of the active portion of said flow tube apparatus;

and further has a Coriolis deflection that extends over the entirety of the axial length of the active portion of said flow tube apparatus.

40. (Previously Presented) The Coriolis flowmeter of claim 1 characterized in that said base is massive and said flow tube apparatus comprises a single flow tube connected to said massive base to define a dynamically balanced structure when vibrated with material flow by said driver.

41. (Previously Presented) The Coriolis flowmeter of claim 1 characterized in that:

said flow tube apparatus comprises a single flow tube defining a dynamically unbalanced structure; and

said base has a mass sufficiency large to vibrationally communicate with said flow tube so that said Coriolis flowmeter defines a dynamically balanced structure when in use.

42. (Previously Presented) The Coriolis flowmeter of claim 1 characterized in that said flow tube apparatus comprises at least one flow tube having a substantially constant outer diameter.

43. (Previously Presented) The Coriolis flowmeter of claim 1 characterized in that said flow tube apparatus is formed of a PFA substance to maintain said process material free from contamination due to ion transfer from said flow tube apparatus to said process material.

44. (Previously Presented) The Coriolis flowmeter of claim 1 characterized in that said Coriolis flowmeter is adapted to measure a flow of corrosive material including